

CLAIMS

1. An apparatus comprising:
a reference circuit configured to generate a bias signal;
a correction circuit configured to correct a bias voltage
of said bias signal; and

5 an output circuit configured to generate an output
current in response to said bias signal, wherein said bias signal
is corrected in response to said bias voltage.

2. The apparatus according to claim 1, wherein said
correction circuit is configured to rapidly sink and source current
to correct said bias signal.

3. The apparatus according to claim 1, wherein said
correction circuit is configured in response to a current enable
signal.

4. The apparatus according to claim 3, wherein said
correction circuit is further configured in response to an output
enable signal.

5. The apparatus according to claim 4, wherein said output circuit is further configured in response to an output data signal.

6. The apparatus according to claim 1, wherein:
said reference circuit comprises a reference amplifier configured to generate said bias signal; and

said correction circuit comprises a bias correction amplifier configured to correct said bias signal.

7. The apparatus according to claim 6, wherein said correction circuit is further configured to sense changes to said bias voltage.

8. The apparatus according to claim 1, wherein said correction circuit comprises:

an amplifier configured to correct said bias signal; and
an enable circuit configured to enable said amplifier.

9. The apparatus according to claim 1, wherein said correction circuit is further configured to provide wide-bandwidth.

10. The apparatus according to claim 1, wherein said output circuit is further configured to generate a differential signal in response to said output current.

11. An apparatus comprising:

means for generating a bias signal;

means for correcting a bias voltage of said bias signal;

means for generating an output current in response to said bias signal; and

means for correcting said bias signal with said correction circuit in response to said bias voltage.

12. A method for rapid switching of a precise current, comprising the steps of:

(A) setting a bias voltage with a first amplifier;

(B) providing said precise current in response to said

5 bias voltage;

(C) correcting said bias voltage with a correction current from a second amplifier; and

(D) generating a differential output signal in response to said precise current.

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13. The method according to claim 12, wherein step (C) further comprises:
sampling said bias voltage.

14. The method according to claim 13, wherein step (C) further comprises:
enabling said second amplifier based on said bias voltage.

15. The method according to claim 12, wherein step (C) further comprises:
sensing changes in said bias voltage.

16. The method according to claim 12, wherein step (C) further comprises:
disabling said second amplifier after said bias voltage is corrected.

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17. The method according to claim 12, wherein step (C) further comprises:

isolating wideband bandwidth to said second amplifier.

18. The method according to claim 12, wherein step (D) further comprises:

turning on and off said precise current in response to one or more control signals.

19. The method according to claim 12, wherein step (D) further comprises:

reducing overall power consumption.

20. The method according to claim 12, wherein step (D) further comprises:

turning on and off said precise current during non-transmit times.